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## Foundations of Zero-Waste Lead to Sustainable Tourism Success: The Case of Kamikatsu

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サステナビリティ&ツーリズムの成功の基礎：上勝のケース

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### Abstract

Sustainable tourism management at travel destinations often requires many years of planning and infrastructure investment to effectively modify business-as-usual practices into long-term focused, sustainably-minded policy. Ideal sustainable tourism destinations maintain stewardship of the local environment, meanwhile preserving a high quality of life for residents, yet still allows companies to establish steady income streams with comfortable margins. There are few examples worldwide of truly sustainable tourism destinations. This paper introduces the zero-waste town of Kamikatsu as a case study of how initial foundation of sustainability-focused management may lead more seamlessly into a successful model of sustainable tourism. Kamikatsu is one of the smallest, rural towns in Japan which has incorporated a multi-layered approach to sustainable development in the community. This level of ethical operations has derived from a collaboration of the Zero-Waste-Academy NPO and Kamikatsu town officials. While striving to support the needs of the local community and comply with more stringent prefectural regulations, they established a zero-waste target for 2020 which has attracted tourism and businesses have grown through innovation and entrepreneurial enterprise. Kamikatsu has strongly established itself as a zero-waste-town, yet it is in the infant stage of positioning itself as a sustainable tourist destination. Due to strategies now in place it has potential for success as a truly sustainable tourism destination. The accountability system put into place in 2017 in Kamikatsu is an example of how the town is building sustainable business and tourism models from essential development and management strategies. Destinations worldwide looking to improve levels of sustainability have much to learn from the zero-waste town of Kamikatsu.

**Keywords:** Kamikatsu, sustainability, zero-waste, tourism, accreditation

## 1. Introduction

Sustainable development has been widely known since the 1987 Brundtland report delivered to the UN in a speech titled “Our Common Future”, Sustainability in business or tourism planning needs to focus not only on the needs of short-term profits or needs, but consider the needs of future generations and long-term success.

This paper starts with an analysis of tourism demand in Japan with a particular emphasis on inbound tourism. The next section deals with growing concerns in destinations where tourism is not managed with a focus on sustainability. The third section describes how the case study of Kamikatsu as a sustainable tourism destination shows potential as a replicable model for other destinations. The key aspect of sustainable tourism success involves maintaining a level of transparency and accountability, introduced in section four on accreditation.

### 1.1 Tourism in Japan

Worldwide, the UNWTO estimates that by 2020, there will be 1.6 billion tourists travelling around the world each year. Additionally, the Asian region is considered to be the “fastest growing source and recipient” of tourists (UNWTO, 2018).

In Japan, the Japan National Tourism Organisation (JNTO) data shows that tourism has been growing faster than original expectations and inbound targets have increased to 40 million by 2020 and 60 million by 2030 (Japan Times, 2017). These visitor number estimates seem probable as the easing of visa restrictions, among other contributing factors, have led to significant increases in visitor numbers each year. In 2017, Japan received 28.6 million visitors. Despite natural disasters plaguing many areas across Japan in 2018, the numbers have been consistently 5-10% higher each month (yoy) with a view to exceed 30 million by year's end (JTB, 2018).

In terms of the World Economic Forum's (WEF) Travel and Tourism Competitiveness Index (TTCI), in 2015, Japan was ranked in the top ten most competitive tourism destinations worldwide. Quality of service, safety and transportation infrastructure (reliable land and sea-based) were key markers of Japan's success. (WEF(a), 2015). A look at the same TTCI in 2015, showed low 4-out-of-7 scores in terms of tourist information services, international openness and natural resources. Looking ahead three years to the WEF index in 2017, Japan improved its ranking to the world #4 rank. There is a question as to whether Japan will be able to hold this top-five position, however, as in terms of sustainability and long-term success of the travel industry in Japan, short-sighted policies may have long-term consequences. For example, despite becoming more ‘price competitive’ rank was improved by reducing fuel prices and taxes on air-travel. These measures are unsustainable, however, as they ultimately compromise environmental stewardship. The WEF(b) reflects this concern, stating, “environmental sustainability remains the area where Japan has yet to achieve better results” (2017).

Referencing Global Service Value Chains (GVC's), the tourism industry, within the umbrella of a larger service industry, which accounts for 75% of Japan's GDP, has been cited as having low productivity and a sluggish rate of growth despite governmental incentives (Konishi, 2017). The travel and tourism sector in Japan's service industry only accounts for 2.6%, but average receipts per arrival are almost twice as high as other countries ranked in the top ten of the TTCL. Therefore, there's indication that the higher the number of inbound visitors becomes, the greater the financial benefits to the economy.

### 1.2 Balancing tourist needs and quality of life of residents

With sudden increases in tourist numbers, however, there are growing concerns over tourism pollution, and whether limits should be set on the number of people allowed to enter destinations at the same time. In traditional cities like Kyoto, one of the most popular destinations along Japan's "golden route" carrying-capacity has become an important issue. Locals residents complain of their loss of lifestyle quality as they see only the negative aspect of tourism. If locals do not see benefits of tourism on their communities, they move away and the town may lose its appeal as an authentic destination if tourists outnumber locals to a high degree.

In efforts to address this problem, many government organisations have made efforts to promote nature-based tourism destinations in rural areas, outside of the 'Golden Route' in order to experience 'authentic Japan' (MAFF, 2017). Diverting large groups of visitors to the countryside, however, may not be the solution many hope it will be. Rural towns often lack the infrastructure and local labor resources to adequately accommodate outsiders. Destinations need to have fundamental facilities to cater to tourist needs for accommodation, food and activities. Rural towns can soon be overwhelmed by tourists if sustainable management systems are not in place to balance the needs of the local people. Protecting natural resources while catering to inbound tourists is another important issue.

There are few easy solutions. Policies can be implemented to protect the local environment and quality of life, such as raising entrance fees or placing occupancy restrictions on entry, but often residents and business owners are at odds on the topic. Overtourism is seen as a problem for locals, but often seen as a great opportunity for businesses. Especially when large numbers of visitors do not share the local language, culture and customs, there is difficulty in adjustment. Local residents feel they lose their quality of life as crowds of outsiders increase. This is especially difficult for locals to accept if resources become degraded, or access to goods and services become less readily available (Mullis et al., 2011).

An example of the clash between outsiders, locals and business owners occurred in Venice in 2016. The UNESCO has warned the destination of Venice of the necessity to make an effort to curb overtourism which is damaging its heritage and authenticity. The destination management tried to limit entry by installing entry gates to the city. This measure was rebutted by local business owners who worried about potentially losing income if visitor numbers decreased (NPR, 2016).

In terms of the economic impact of tourism, Mowforth et al., state that 'vast research has

shown' that local communities are less likely to receive benefits from opening up to tourism if they 'lack control' in planning and policymaking, as well as 'lack ownership' of established tourism products (2016). This is the reason opening channels of communication between all stakeholders is considered a key element of sustainable tourism development.

To cater to all businesses across Japan in cities or countryside areas, Japan's easing of duty-free regulations in 2014 seems to have encouraged spending on a wider variety of products by inbound customers and enhanced the made-in-Japan brand (JNTO, 2018). Industrial tourism has also become a new tourism asset in 2017, promoted to inbound visitors who want to visit workshops to see products being handcrafted as a part of their Japan travel experience. Industrial tourism has a strong connection to rural destinations and increases the perception of quality in the made-in-japan branding (JETRO, 2018).

### 1.3 The Case of Kamikatsu

As stated above, sustainable tourism is maintaining a focus on protecting the needs of future generations while maintaining an acceptable quality of life to fulfill current needs. In this condition, sustainable development and management policies focused on preserving local resources as inbound revenue increases becomes more important to maintain quality of life for local, tax paying residents. Local taxpayers must be reassured that the inconveniences of increased tourism offers some benefit to their lives. This concept is reinforced by the UNESCO organisation which states that "Sustainability is a paradigm for thinking about the future in which environmental, societal and economic considerations are balanced in the pursuit of an improved quality of life" (2018). There are clearly limitations to the ease of transforming an existing tourism destination into a sustainable tourism destination. It is therefore worth looking at an example of a destination that has first been established, managed and planned using sound sustainable policies before welcoming a large number of tourists. This is the situation many rural destinations are in at the moment as they start to make arrangements to accept inbound tourists. Kamikatsu is the smallest town in Tokushima prefecture, on Shikoku island and is the best, and only, example of a zero-waste-town in all of Japan. 'Zero-waste' means it is striving to completely reuse or recycle all of its waste by 2020 (Zero Waste Academy, 2017).

In small rural towns like Kamikatsu which are just starting to see interest in their town as a tourism destination, over tourism may seem a far and distant future problem, however once access and appeal are created a few hundred visitors could overwhelm a small population. Kamikatsu has around 1,500 residents but is already starting to receive twice as many inbound travelers. Due to the strict sustainable regulations of the town, however, which are in place for all residents and businesses, it should not matter how quickly tourism grows in maintaining the quality of sustainability.

Uniquely, due to the appeal of Kamikatsu as a zero-waste-town, it currently attracts the *right kind* of tourist who are also interested in zero-waste policies. Due to this factor, there has been no resistance by visitors to accepting strict waste separation requirements. In this way, due to embedded appeal of the destination as sustainability-focused, the unique characteristics

of the Kamikatsu visitor may inoculate the town and its residents from the ill effects of tourism as it grows organically.

Since 2002, Kamikatsu's town office has tried unique approaches to waste management unheard of in other locations: no incineration, garbage collection or landfill, 100% composting by households and businesses, and a centralised garbage sorting station. In the 1990's Kamikatsu town was like many other areas of Japan in waste management strategies: everything was burned. There was no garbage separation or recycling strategies in place. While other areas added home separation and different garbage pick-up days, it was harder for this town to change. Lack of infrastructure was the problem as there was no regular garbage collection, landfill or even a high-quality incinerator. In 1995, the town officials did a cost-benefit analysis and found that it was better for the environment, in addition to reducing costs, if a new rule for 100% composting of kitchen waste were mandated. Included in the cost-benefit analysis was the 50% subsidy of electronic composting machines for residents. Once this mechanism was in place, composting alone helped the town quickly reduce waste by one-third (Kamikatsu, 2018).

By 2016, the town officials estimate that nearly 80% of all garbage is sorted and only 20% of this is being sent to the landfill at a cost. Compare these figures to Japan's national average where only 21% of waste is recycled in municipalities (Japan Times, 2017). NPO Zero-Waste Academy staff, Terumi Azuma explained on the tour that the biggest hurdle is to change one's mindset and consider all trash as non-burnable, "it all has to go somewhere!" (Zero-Waste-Academy Tour, 2016). The decision to promote a centralised recycling center for residents, subsidize home composting systems and pursue a goal of becoming 'Zero-waste by 2020' was devised out of an analysis of local capabilities, infrastructure and needs.

Since 2002, garbage has been sorted at a central facility into 34 categories. On a tour of the facility, however, I found that there were in fact many sub-categories. So, although residents bring their waste in a few bags, the trash is then separated with the help of staff into more than 60 overall categories at the sorting station. Accessibility is also important, so the facility is open every day of the year and NPO staff will go to pick up waste on a regular basis if any residents are unable to travel to the sorting facility (Azuma, 2018). Kamikatsu businesses are also required to follow the same zero-waste sorting requirements as residents. This has spurred entrepreneurship and innovation in business as seen in the accreditation scheme launched in 2017.

Zero-waste has been a difficult transition for the town, but due to the collaboration between the city office, a local NPO, local stakeholders and young entrepreneurs- the three pillars of sustainable tourism development has been maintained in planning. There is a strong stewardship of the local environment, members of the community have been supported, while new sources of income via tourism and new industry have been added.

Kamikatsu is a unique destination to study in terms of sustainable tourism development. Most tourism destinations only think of imposing sustainable-minded policy on operations once they are experiencing a sudden increase in the number of tourists. Typical tourism

destinations also have a large number of tourism products and services available before considering adoption of sustainable models. Kamikatsu, on the other hand, has first built sustainable practices which has led to an increase in tourism due to their higher than usual standards.

The type of domestic and inbound visitors to Kamikatsu are also atypical of other major tourist destinations in Japan. The new type of visitor is interested in learning about sustainability and how the town is planning and managing waste to meet its target by 2020. A new facility called WHY is being built to have a multipurpose platform to house, train and inform inbound visitors, while providing a functioning waste sorting station for Kamikatsu locals (Murata, 2017). Although the town only has a population of around 1,500 people, as of 2017, there are approximately 2,600 visitors who come to Kamikatsu to learn about its zero waste initiatives (Zero Waste Academy, 2018).

#### 1.4 Accreditation

Transparency and accountability are key factors in any sustainable tourism destination. At the end in 2017, the Zero Waste Academy NPO launched a new accreditation scheme which has great potential to set a new transparency standard for sustainable business operations. It seems this is the first sustainable business accreditation scheme in Japan and has potential to be adopted in other areas of Japan once it become more widely known. Kamikatsu's accreditation scheme is a voluntary compliance from business owners in the town who publicly and clearly display stickers on the front of the shop which illustrate the specific ways they are following zero-waste initiatives (ZWA map, 2017, Zero Waste Japan, 2018).

As of May, 2018 there were seven businesses in Kamikatsu that had joined the accreditation scheme and another restaurant had joined in Nagasaki. Kamikatsu local resident and business owner Terumi Azuma was working as the head of the Zero-Waste Academy for many years and has helped launch the new accreditation scheme. Azuma's business 'Cafe Polestar' is a restaurant which proudly adheres to five of the six targets without any indication of compromise in quality or efficiency. Cafe Polestar is a beautifully designed facility offering diners delicious food with stunning natural views and friendly service. The food, coffee and desserts are top-class and each plate is beautifully presented with Kamikatsu's famous decorative leaves (Azuma, 2018).

Ristorante Pertornare which adheres to five of the six targets at their fine dining Italian restaurant additionally promotes societal-support initiatives of pet rescue and guide-dog use support. Target icons are prominently displayed at the front of their restaurant. Pertornare adds an additional layer of transparency in business: a chalkboard detailing the source of the day's vegetables, fish and meats. Plating on local trees sourced from clearing, or plates from the '*kuru-kuru*' reuse shop, shows how creative interpretation of a 'locally sourced' concept can be embraced as a high-quality branding strategy.

Another accredited company, Bar Irori, is located up a steep hill in the valley, offering high-quality glamping (glamorous-camping) accommodation. This facility uses solar panels for

power, river water for cooling and upcycled wood for a bar. Four of the targets are adopted here while high-quality hospitality is delivered in line with sustainability targets.

The Rise&Win brewery is one of the first accredited facilities visitors encounter due to its location at the base of the town. The unique, grid-like building was made entirely of waste materials. The unique, double-layered main window is stylish and functional in its sustainable design. BYO is one of the three targets this business has embraced as customers are encouraged to use their own containers to fill up on beer and other products at the shop. The start-up has been so popular, the owners have opened a second brewery and an affiliated bar in Tokyo. Transparency and education are important aspects of the company mission statement. Guided educational tours of both breweries can be booked via the website (Rise&Win, 2018). The Rise & Win facility as well as their second venture, the Stone Wall Hill brewery, can be classified under the label of industrial tourism as they offer tours and education of their operations in each brewery. These activities help promote made-in-Japan products using sustainable, upcycling as a key element of entrepreneurship and innovation. The new tourism complex, waste sorting station, accommodation facility and multi-purpose rooms called 'WHY' is being designed and built by the same design team as the Rise & Win brewery, commissioned by Kamikatsu town. This facility will become the main tourist attraction in the town and is planned to open by 2020 (Murata, 2017).

- Local Food : Use of local products
- Returnable : Offers reusable and returnable containers
- Idea : Using original alternatives to avoid single-use products
- Open for Action : Encourage customers to take part in zero-waste activities
- BYO : Encourage customers to bring and use their own containers when purchasing products.
- Local Reuse : upcycling waste materials from the local area

Kamikatsu Accreditation Categories (2017)

Accreditation or certification schemes help sustainability by adding a layer of transparency to business practices. This further contributes to positive marketing of a destination, as well as benchmarking, and standing out among competitors. Transparency schemes hold businesses accountable to consumers and their communities. Black and Crabtree (2007) state that the purpose of licensing, or accreditation schemes, is to "protect the public from incompetent practitioners" but it must not act as "barriers to business" (p.17). All businesses must comply with the town's mandatory zero-waste regulations. In contrast, the details of how most traditional businesses comply is not often disclosed to the public.

Addressing the issue of destination management and implementing 'zero-waste targets' is a key strategy in addressing scarcity of resources (Lehman, 2010). Ethical branding and transparency has been shown to increase perceptions of value in products. This can be

extended to include destination branding in tourism. To communicate ethical standards and initiatives, in line with mission statements, many companies are using CSR (Corporate Social Responsibility) pages on their company profile information which is accessible to the public. Sustainable destinations need to be transparent about the details of their initiatives in order to be trusted and respected. One way destinations can improve transparency is to adhere to accreditation or certification schemes. According to DeJong et al., (2018) there are problems with “greenwashing” if a reputable accreditation is not in place and businesses are allowed to appear as if they are following the highest levels of sustainability without actually doing so.

The government run Tsukigatani Onsen hotel restaurant in Kamikatsu follows two of the accreditation targets. As the main accommodation facility in the valley, this hotel boasts a biofuel facility as well as adhering to the basis of the zero-waste initiatives. Mr. Nonoyama, founder of the Panagea company, runs a glamping tent as well as a campsite and cottage. Nonoyama has long had a great passion for tourism to Kamikatsu. His company coordinates with the zero-waste academy to provide study and research tours of the garbage sorting facility. Additionally, Panagea’s friendly young staff run active kid-friendly nature adventure activities, can organise zero-waste weddings as well as cater to larger group tours.

### 1.5 Discussion

So much progress has been made in the small town of Kamikatsu since 2003, when the town officials first declared their ambitious target of “zero waste by 2020.” Momentum has been steadily building and much has changed in the last two years. The NPO Zero-Waste Academy’s Akira Sakano spreads the message, of how the town has been transformed into a zero-waste town, around the world as she tours abroad as a keynote speaker. Local business owners are actively involved in not only running sustainable businesses, but also promoting the accreditation system to other areas and offering training and guidance. Creating more sustainable accommodation and diverse sustainable tourism products welcomes more inbound tourists, yet allows town planners to maintain operations within the boundaries of sustainability. Starting to export not only the methods of sustainability through the accreditation scheme, but also exporting actual products made by locals in the upcycling *Kuru-Kuru* shop, locally crafted Rise & Win beer, among other products, is another way to position Kamikatsu as a sustainable destination. Additionally, having an active online and social media presence to spread the message zero-waste is another important aspect of successful branding for Kamikatsu.

The case of Kamikatsu is particularly interesting when you consider that most rural communities around Japan share similar hurdles of declining population and maintaining local resources; yet are also looking to tourism to help them survive. Kamikatsu has been very successful in maintaining increasing levels of domestic tourists while attracting over 2,000 inbound visitors each year, attracted to this zero-waste town, and its initiatives. Kamikatsu town has been able to show steady and organic growth in tourism by first improving existing attractions, developing new tourism products and promoting services which abide by zero-



waste initiatives.

Building from the foundation of a zero-waste policy puts Kamikatsu in a stronger position than most destinations. Leveraging the existing understanding of a community which abides by strict waste reduction and recycling initiatives, should ensure stronger long-term growth without making less sustainable compromises for visitors. In this way, Kamikatsu is in a strong, unique position as a truly sustainable tourism destination in Japan.

I predict that the momentum will continue to build as Kamikatsu opens its new facility “Why?” in 2020. This new facility will allow the town to welcome more visitors to its town for not only education, but for fun, family vacations and leisure by the right of kind visitors who appreciate a sustainable destination of high value. Other visitors may start to come who are not familiar with zero-waste initiatives, but who become impressed by the high-quality of tourism products. Once they realise all operations are maintained in line with strict zero-waste initiatives, it will add further value to their experience.

The story of Kamikatsu is a story of hope. Strict regulations to effectively manage waste and encourage use of local products can strengthen communities and create a lasting legacy of true sustainability. Operations that balance the needs of the environment with the needs of local people and steady profits. Rural destinations hoping to tap into the inbound tourism boom should look to Kamikatsu for business models and destination management strategies to model effective tourism products that do not compromise integrity and local identity.

## 1.6 Conclusion

As rural destinations across Japan are struggling with population decline, limited social services and environmental issues, the activities of Kamikatsu town can be a source of education and inspiration. Kamikatsu is an example of best practice in community development as well as tourism destination management. Reducing waste by changing the mentality of ‘single use’, landfill or burnable to purchasing only things that can be reused is a major accomplishment. Waste management, sustainable development and ethical business practices are concerns shared in communities worldwide. The community engagement and management efficiency which are strengths of Japanese society, have potential to create healthier societies, sustainable tourism appeal and greater profitability over the long-term.

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## References

Azuma, Terumi. (2018). Interview with Terumi Azuma, co-owner of Pole Star Cafe, Zero-Waste Academy management.

- Brundtland, Gro. H. (3/20/1987). Report of the World Commission on Environment and Development: Our Common Future. URL: <http://www.un-documents.net/our-common-future.pdf>
- De Jong, M. D. T., Harkink, K. M., & Barth, S. (2018). Making Green Stuff? Effects of Corporate Greenwashing on Consumers. *Journal of business and technical communication*, 32(1), 77-112.
- Japan Times. (2016). Japan Doubles Overseas Tourist Target. Viewed online: <https://www.japantimes.co.jp/news/2016/03/30/national/japan-doubles-overseas-tourist-target-2020/#.W5im2yQza70>
- Japan Times. (6/10/2017). Plastic fantastic: How does Tokyo recycle its waste? Viewed online: <https://www.japantimes.co.jp/life/2017/06/10/environment/plastic-fantastic-tokyo-recycle-waste/#.W6CYpSQza70>
- Jarman-Walsh, Joy. (5/1/2018). Interview with Panagea Fields Founder, Mr. Nonoyama. *2018 Kamikatsu - Pangaea Field Sustainable Tourism Products*. YouTube: <https://www.youtube.com/watch?v=LWyL447jgII>
- JETRO. (2018). *Industrial Tourism in Japan: Come See What Makes Japan Tick*. Japan External Trade Organisation. [https://www.jetro.go.jp/en/ind\\_tourism/](https://www.jetro.go.jp/en/ind_tourism/)
- JNTO. (2018). Japan's Tax Exemption: Guide in English. <https://tax-freeshop.jnto.go.jp/eng/shopping-guide.php>
- JTB. (2018). Japan Bound Statistics. *JTB Tourism, Research and Consulting Co.* <https://www.tourism.jp/en/tourism-database/stats/inbound/#annual>
- Kamikatsu Town Pamphlet. (2018). Zero Waste Kamikatsu 2020年までにゴミゼロに！
- Konishi, Yoko. (2017). Global Service Value Chain in Japan: Inbound Tourism cases. Research Institute of Economy, Trade and Industry (RIETI). Policy Discussion Paper Series. PDF viewed online: <https://www.rieti.go.jp/jp/publications/pdp/17p011.pdf>
- MAFF. (2017). *Rural Tourism in Japan*. Ministry of Agriculture, Forestry and Fisheries. PDF [http://www.maff.go.jp/e/policies/rural\\_dev/attach/pdf/index-1.pdf](http://www.maff.go.jp/e/policies/rural_dev/attach/pdf/index-1.pdf)
- Mowforth, M & Munt, I. (2016). *'Hosts' and Destinations: for What we are About to Receive..* Tourism and Sustainability: Development, Globalisation and New Tourism in the 3rd World, 4th Edition. Routledge.
- Mullis, B & F. Figart. (2011). Global Tourism: Achieving Sustainable Goals - Sustainable Tourism : International Cooperation for Development. *Online Toolkit and Resource Series*. PDF courtesy of George Washington University. URL: [https://www2.gwu.edu/~iits/Sustainable\\_Tourism\\_Online\\_Learning/Workbooks/Global\\_Tourism.pdf](https://www2.gwu.edu/~iits/Sustainable_Tourism_Online_Learning/Workbooks/Global_Tourism.pdf)
- Murata, Matsunami (2017). Zero-Waste Center "WHY" pamphlet. Longrain PR.
- NPR. (2016). As Tourists Crowd Out Locals, Venice Faces Endangered List. <https://www.npr.org/sections/parallels/2016/11/25/503038911/as-tourists-crowd-out-locals-venice-faces-endangered-list>
- Rise&Win. (2018). Official Website of Rise & Win, StoneWall Hill Brewery, Tap Room Tokyo. <http://www.kamikatz.jp/>
- Stahl, Konrad & Roland Strausz. (2/7/2017). Certification and Market Transparency. *The Review of Economic Studies*, Volume 84, Issue 4, Pages 1842-1868.
- UNESCO. (2018). Sustainable Development. *United Nations Educational, Scientific and Cultural Organization*. URL: <https://en.unesco.org/themes/education-sustainable-development/what-is-esd/sd>
- UNWTO (6/2018). *UNWTO World Tourism Barometer and Statistical Annex, June 2018* <https://www.e-unwto.org/doi/pdf/10.18111/wtobarometereng.2018.16.13>
- WEF. (2015). World Economic FORum: Travel and Tourism Competitiveness Index (TTCI). <http://reports.weforum.org/travel-and-tourism-competitiveness-report-2015/index-results-the-travel-tourism-competitiveness-index-ranking-2015/>
- Zero-Waste-Academy Tour. (2016). Tour of the Garbage Sorting Station by the Zero-Waste Academy NPO staff.
- Zero-Waste-Japan. (1/9/2018). ゼロ・ウェイスト認証制度の基礎 / *Introduction to the Zero Waste Accreditation system*. YouTube:

<https://www.youtube.com/watch?v=1UTxX7tmQW4&t=33s>  
ZWA Accreditation Map. (2017). Welcome to Zero-Waste Town Kamikatsu. Accreditation Map.

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